

REGULATION

RESPECTING AGRICULTURAL OPERATIONS

HIGHLIGHTS



PROVIDING
SUSTAINABLE
BENEFITS

T  THE
ENVIRONMENT

2003 EDITION



FOREWORD

The *Regulation respecting agricultural operations* aims at ensuring equilibrium between agricultural practices and sustainable development in order to protect the environment, and in particular maintain soil fertility, preserve water quality and protect quality of life and health.

This regulation advocates a new approach centred on a more rigorous management of phosphorus within each agricultural operation, in order to achieve a good balance between fertilizer inputs and plant needs and to reduce non-point source pollution caused by these products leaking into watercourses. Moreover, the regulation encourages the preservation of land for use by future generations.



TABLE OF CONTENTS

Foreword	1
Introduction	4
1. Tangible Environmental Gains	6
2. Contents of the Regulation	7
3. Prescribed Standards	9
– Livestock waste and other fertilizing substances	9
– The agro-environmental fertilization plan	11
– Locations for raising facilities and storage facilities for livestock waste	12
– The circulation of livestock	13
– Follow-up of standards	13
4. Administrative Simplifications	14
– Project notification	14
– Certificate of authorization	15
5. Provisional Arrangements in Limited Activity Zones and Pig Production	16
– In a limited activity zone	16
– Outside the limited activity zones	17
6. Responsibilities of Key Players	18
– The operator of a raising facility	18
– The operator of a spreading facility	20
– The operator (or responsible caretaker) of a storage facility	21
– The operator of a cultivated parcel of land	21
– The land owner (and the person to whom maintenance or usage has been conferred)	22
– The agronomist (member of the Ordre des agronomes du Québec)	22
– The engineer (member of the Ordre des ingénieurs du Québec)	23
7. Penal Provisions	24
Glossary	25

APPENDICES

I	Chart of maximum annual deposits for all fertilizers used on a parcel of land according to crops, in kilograms of total phosphorus (P_2O_5) per hectare	28
II	Territories of municipalities considered limited activity zones	31
	Address of the Information Centre of the Ministère de l'Environnement.....	36
	List of Regional Offices of the Ministère de l'Environnement.....	36



INTRODUCTION



Following the *Rendez-vous sur l'agriculture et l'agroalimentaire québécois* held in 1998, the members of the *Forum des décideurs* agreed, among other things, about the need to update the *Regulation respecting the reduction of pollution from agricultural sources (RRPAS)* to better meet environmental requirements and take into account the specific situation of agricultural operations in Québec.

Numerous consultations undertaken by the Ministère de l'Environnement took place with representatives from the agricultural field, agronomists and a number of environmental groups to identify new measures required to solve the problems of manure storage and spreading that had arisen. The regulation focuses on the soil support capacity and the actual fertilizing value of manure being taken into account at all times. It advocates modern practices and technological solutions based on the situation of each operation, not broad-based standards. From this overhaul stems the simplification of administrative requirements, to the advantage of all stakeholders in charge of enforcing the resulting environmental regulations.

The regulation was also submitted to the scrutiny of a work committee created by the government on May 1, 2002. The Union des producteurs agricoles, the Fédération des municipalités du Québec, the Union des municipalités du Québec, the Fédération des producteurs de porcs, and government representatives all collaborated to improve the contents of the present regulation.

The *Regulation respecting agricultural operations* will make it possible to increase environmental performance of agricultural operations through the improvement of water quality and consideration of the soil's fertilizing needs. It sets new guidelines for the management of livestock waste and other fertilizing substances regarding storage, spreading and treatment, as well as by providing a better framework for the management of agricultural operations and increased on-site control.

The regulation is based on the goal to reach a balance between the soil support capacity in phosphorus and the amount of fertilizing substances spread, and this immediately for any new facility or herd increase, and by 2010 for existing farms. It is also aimed at imposing storage and transport without spillage of livestock waste and its treatment for reclamation or elimination.

Furthermore, efforts have been made to lighten the administrative process, notably by replacing the certificate of authorization with a project notification form, in certain cases.

The government intends to rigorously follow up on the implementation of the control process in the enforcement of the regulation. To this effect, it has increased its regional inspection staff.

The *Regulation respecting agricultural operations* gives effect to the consultations of major players on the agro-environmental scene and the work carried out by the work committee created by the government in view of improving the RRPAS, with the hope of establishing agricultural practices which are more in tune with the need to protect the environment.



1

TANGIBLE

ENVIRONMENTAL GAINS



The *Regulation respecting agricultural operations* is based on a scientific strategy for the management of fertilizing substances which affects all agricultural operations. It reinforces the good practices which already respect the environment and sets new standards so that agriculture in Québec can continue to be a source of collective pride and an important economic asset.

The regulation mainly aims at ensuring sound management of fertilizing substances. Based on scientific expertise, it sets precise standards for ensuring the protection and improvement of the quality of surface and ground waters in Québec. It encourages the preservation of land for use by future generations.

In concrete terms, it extends the obligation to set up watertight storage facilities and prescribes restrictions on spreading which will progressively ensure the increased protection of 400,000 km of watercourses and ditches across Québec.

Lastly, the regulation encourages sustainable development by establishing clear and simple rules. It provides for support, follow-up and control activities by government inspectors. Hence, from now on, inspection by the Ministère de l'Environnement will be mandatory whenever an application for enlargement is made or other projects in limited activity zones are intended.

2

CONTENTS

OF THE REGULATION¹



The purpose of the *Regulation respecting agricultural operations* is to ensure increased protection to the environment, particularly water and soil, from pollution caused by certain agricultural activities.

First, it focuses on the management standards for livestock waste regarding its storage, spreading and treatment. Next, it focuses on the management of fertilizing substances, the standards for the location of facilities for raising livestock and for storing waste, as well as livestock circulation near bodies of water.

From an administrative point of view, it attempts to simplify the regulation by replacing a certificate of authorization with a project notification in many cases. It introduces a more rigorous control of the application of the regulation by increasing services offered by the Ministère de l'Environnement, inspection visits and access to information on agricultural operations needed for the equitable enforcement of the new provisions.

Next, it defines the responsibilities of various stakeholders and provides penal provisions.

The regulation applies to livestock raising and the facilities used for that purpose, the storage facilities for livestock waste and the spreading of waste. It also

1. This popularized version of the *Regulation respecting agricultural operations* does not replace the legal text, which should be referred to for legal interpretation.

applies to the parcels of land used for cultivation, excluding silviculture, as well as the use of fertilizing substances of all sorts.

The raising of canids or felids is not included in the regulation, nor are fish-farming, zoos, parks and petting zoos.

The provisions of the present regulation are applicable to buildings in areas kept for control purposes or in agricultural areas established in accordance with the *Act respecting the preservation of agricultural land and agricultural activities* (R.S.Q., c. P-41.1).

The *Regulation respecting agricultural operations* replaces the *Regulation respecting the reduction of pollution from agricultural sources*. Its application also refers to the *Environment Quality Act*.

The *Regulation respecting agricultural operations* takes effect as soon as it appears in the *Gazette Officielle*.



3

PRESCRIBED

STANDARDS



Livestock waste and other fertilizing substances

It is forbidden to dump, deposit, receive or store livestock waste or to allow the deposit, dumping, spreading or storing of livestock waste, except when provided for in the regulation.

Storage of solid manure in heaps in cultivated fields is subject to the following conditions: the heap must be at least 150 m from streams, rivers, lakes, ponds, wetlands, or natural swamps whose total run-off areas are greater than 2 m², and more than 15 m from irrigation ditches; the ground surface must be covered with vegetation; the ground must have a slope of less than 5%; surface runoff must not be able to reach the heap; and the heap must not remain in the same location for two years in a row. These practices will not be allowed as of October 1, 2005.

Raising facilities with liquid manure management must have immediate access to watertight storage facilities for all livestock waste produced in them, as was the case before.

Raising facilities with solid manure management, whose annual production of phosphorus (P₂O₅) exceeds 1600 kg, must have access to watertight storage facilities for all livestock waste produced in them, or to any other equipment or building intended to prevent the contamination of surface and ground waters. This obligation applies as of April 1, 2010 for raising facilities in existence on June 15, 2002, and as of April 1, 2005 for new raising facilities.

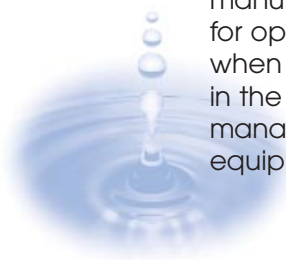
Storage facilities must have the capacity to receive and accumulate without spillage the livestock manure produced in raising facilities as well as all other products received there (dairy effluents, wastewater), for the whole period during which the spreading of livestock manure cannot take place.

Storage facilities must not be equipped with overflow drains and sump drains. They must be laid out in such a way so as to prevent any infiltration by runoff.

Storage facilities must be equipped, for their entire outer perimeter, with a drain placed at the same level or below the floor or bottom. The drain must not be connected to the storage facility, and its outflow is connected to an observation well of a minimum interior diameter of 40 cm, accessible for taking samples. A permanent marker must indicate the location of the drain outlet. The drain must remain functional at all times and make use of gravity or a pump to evacuate water.

Runoff from livestock yards must be intercepted and channelled towards a watertight storage facility, or managed using all other equipment or facilities whose purpose is to prevent the contamination of surface and ground waters. This obligation is effective as of April 1, 2010 for operations in activity on June 15, 2002, and as of April 1, 2005 for new operations.

Wastewater from dairy effluents must be channelled towards storage facilities for operations with liquid manure management, towards the holding basin for operations with solid manure management, or, when permitted, towards the sewer system. However, in the case of a raising facility with solid manure management in existence on June 15, 2002, which is equipped with a storage facility and a holding basin



whose capacity is insufficient for the reclamation of dairy effluents, there is an obligation to channel this water only if an increase in the size of the herd requires an increase in the capacity of the storage facility.

The spreading of livestock manure and other fertilizing substances must be done so that the waste does not flow towards watercourses or bodies of water. Spreading is forbidden inside a barrier strip, with limits defined by municipal by-laws, or otherwise inside a 3 m barrier strip from the watercourse, and inside a 1 m strip from the agricultural ditch.

The spreading period must take place between April 1 and October 1, on unfrozen ground in the absence of snow. Upon the recommendation of an agronomist, a low proportion of the annual volume of the livestock waste produced in the raising facilities may be spread after October 1.

The spreading of livestock waste using mobile or fixed spreading equipment designed to project the waste at distances of over 25 m is forbidden.

The manure must be spread using equipment with low ramps. This obligation applies as of April 1, 2005 for manure from pig raising facilities, and as of April 1, 2007 for manure from other sources.

The agro-environmental fertilization plan

The spreading of livestock waste and other fertilizers is only permitted on already cultivated parcels of land. It must comply with the provisions of an agro-environmental fertilization plan established in accordance with the regulation for each parcel of land to be fertilized.



The agro-environmental fertilization plan must be signed by an agronomist or a producer with certified training and must list the amount of fertilizers to be used for each of the parcels, the mode of spreading, and the duration and dates of spreading.

The person who cultivates the parcel of land, the owner of this parcel, and if necessary, an authorized representative of the Ministère de l'Environnement, must each possess a copy of the plan. The plan must be kept for no less than two years after the spreading has taken place, and must be forwarded to the Ministère de l'Environnement upon request.

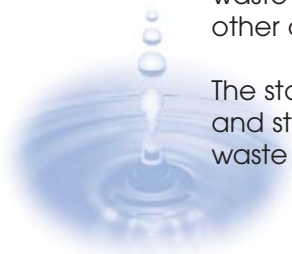
Locations for raising facilities and storage facilities for livestock waste

It is prohibited to build, alter, or enlarge a raising or a storage facility into or onto streams, rivers, lakes, ponds, wetlands, or natural swamps, or within a distance of 15 m from these. This regulation applies to waters whose total runoff areas are larger than 2 m².

This provision does not apply to ponds that are reserved exclusively for fire fighting or for crop irrigation.

The ground upon which a raising facility is built must be shielded from any contact with the livestock waste produced there, using watertight floors and other appropriate means.

The storage facility must be equipped to receive and store, without spillage, the entirety of livestock waste produced there before each unloading.



The livestock waste unloading equipment and the raising and storage facilities must be maintained completely watertight at all times. The same stipulation applies to livestock waste transport containers.

A livestock yard should be set up such that it cannot be reached by runoff.

The circulation of livestock

Starting on April 1, 2005, it will be prohibited to give livestock access to any watercourse, body of water or its barrier strip.

Follow-up of standards

The Ministère de l'Environnement is working to issue a report for this regulation by June 15, 2005 and from then on, foresees to issue one report every five years. To this end, the Ministère will, over the following months, set up databanks with resources on the different agricultural practices, alternative solutions for storing livestock waste, and the different possibilities for treating these. The Ministère will also collect all other information that can help create this comprehensive report, which will allow it to legislate with prudence and foresight in this field.

Moreover, a team of inspectors will visit all agricultural operations in order to verify compliance with this regulation and to support agricultural producers in gradually updating their practices. These field operations will enable the recommendation of modifications, where required.



4

ADMINISTRATIVE

SIMPLIFICATIONS



The *Regulation respecting agricultural operations* is designed to reduce the administrative formalities for farm operators in many respects. For certain projects submitted to the Ministère de l'Environnement, the requirement of a certificate of authorization has been replaced by a project notification, which must be submitted prior to starting the project.

Project notification

With the exception of those projects for which an authorization is required, a project notification must be submitted to the Minister of the Environment at least 30 days before the project is to begin. Among those projects are:

- Building new raising facilities with either liquid manure management or solid manure management whose annual phosphorus (P_2O_5) production exceeds 1600 kg.
- The increase above 5% with regard to the right-to-farm legislation on the annual phosphorus (P_2O_5) production of an existing raising facility with liquid or solid manure management; in which case the annual phosphorus (P_2O_5) production would exceed 1600 kg.

-
- A changeover within a raising facility from solid to liquid manure management.
 - Building or enlarging a storage facility.

All project notifications must be submitted using the form issued by the Ministère de l'Environnement for this purpose. They must include the following information: identification of the farm operator, brief description of the project, its location, the foreseen date for beginning the project, and an update, if necessary, of the phosphorus status report.

Certificate of authorization

The following projects require a certificate of authorization:

- Building a new raising facility whose annual phosphorus (P_2O_5) production will exceed 3200 kg.
- Increasing, with regard to the right-to-farm legislation, the annual phosphorus (P_2O_5) production of a raising facility above 3200 kg, whereby the increase itself is higher than 500 kg.

The application for an authorization must be made using the form issued by the Ministère de l'Environnement for this purpose and it must contain the following information: information required by the *Regulation respecting the application of the Environment Quality Act*, an agro-environmental fertilization plan, plans and specifications of the storage facilities, where applicable, as well as information relating to the reclamation or removal of livestock waste.



5

PROVISIONAL ARRANGEMENTS

IN LIMITED ACTIVITY ZONES AND PIG PRODUCTION



In the territory of the 281 municipalities mentioned in Appendix 2, the regulation foresees specific measures which apply provisionally. Because of the strong increase in pig farming operations over the past few years and the environmental impacts stemming from these operations, particularly the degradation of the quality of several watercourses and the overfertilization of soils, the government has decided to put forth specific pig farming measures in limited activity zones. A two-year moratorium was imposed on all new pig farming operations in limited activity zones. Outside the territory of these 281 municipalities, the limitations provided for will cease to apply 18 months after the coming into effect of the regulation. This period will make it possible to carry out complete phosphorus balance checks on all Québec farms, to compile the results and, using the data thus obtained, to exercise better management and control.

In a limited activity zone

- No new pig raising facility will be allowed.
- In pig raising facilities in existence on June 15, 2002, sow or boar stocks of more than 250 pigs may be raised, under the condition that the livestock waste undergoes complete treatment and that the resulting products are used outside the limited activity zone.

-
- In pig raising facilities in existence on June 15, 2002, an increase of stocks of up to 250 pigs is permissible, if one of the following conditions is met:
 - Complete treatment of livestock waste and utilization of resulting products outside of the limited activity zone.
 - The farm operator can manage the cultivated parcels of land as the owner, as a lessee, or through a written agreement, in the latter case as long as the parcels are less than 20 km from the raising location. This authorization may be granted only once before June 15, 2004, and for only one of the raising facilities belonging to the same owner.
 - Facilities for raising livestock other than pigs can only be allowed if one of the following two conditions are met: the livestock waste undergoes complete treatment and the resulting products are used outside the limited activity zone, or, the livestock waste can be spread on the cultivated parcels of land owned by the farm operator of the raising facility.

Outside the limited activity zones

- New pig raising facilities will be allowed only if the waste undergoes complete treatment and if the resulting products are used outside a limited activity zone.
- In pig raising facilities in existence on June 15, 2002, sow or boar stocks of more than 250 pigs may be raised, if one of the following two conditions are met: the livestock waste undergoes complete treatment and the resulting products are used outside the limited activity zone, or, the livestock waste can be spread on the cultivated parcels of land owned by the farm operator of the raising facility.



6

RESPONSIBILITIES

OF KEY PLAYERS



The operator of a raising facility

- Anyone who transports livestock waste to a storage facility belonging to a third person, or to a facility which treats, transforms, or eliminates waste and which is authorized in accordance with the *Environment Quality Act*, must sign a written agreement for this transaction with the manager of the operation. In the case of a storage facility, the contract must be accompanied by a notice of an engineer, affirming that the storage facility has sufficient capacity for the additional livestock waste foreseen in the agreement. For both agreements, each signing party must have a copy of the agreement to be kept for a period of no less than two years beyond its termination, and must forward it to the Ministère de l'Environnement upon request. For storage facilities, the operator of the raising facility must keep a shipping record with all the pertinent information regarding the transported waste; this record must be kept on file for no less than two years after its last entry, and must be forwarded to the Ministère de l'Environnement upon request.
- Anyone who carries out livestock waste spreading, must have sufficient cultivated land area for the entirety of the waste surplus for each year of cultivation. The minimum surface requirement is calculated using the maximum deposit figures as listed in Appendix 1. The operator can manage the cultivated parcels of land as the owner, as a

lessee, or through a written agreement with a third party. Each party of a lease or an agreement must possess a copy of the lease or agreement and keep it for a period of no less than two years beyond its termination, and must forward it to the Ministère de l'Environnement upon request.

- All farm operators required to establish an agro-environmental plan have until the 2004 crop season to produce this plan, and this according to a schedule that varies with the type of farm. The plan must consider the annual phosphorus count of the raising site, by establishing the annual volume of phosphorus produced by the herd combined with all other used fertilizers, as well as the amount of waste which can be spread on available land, by respecting the maximum levels listed in Appendix 1.
- The operator must, at least once a year, arrange for the analysis of the fertilizing content of the livestock waste which is produced at his/her facility and which is destined to be spread onto cultivated land; this analysis is not required if the annual phosphorus (P_2O_5) production of solid manure management does not exceed 1600 kg.
- Upon request, the operator must provide the Ministère de l'Environnement with a copy of the most current receipt of payment that he/she has received from the Financière agricole du Québec in accordance with his/her insured land; this copy must be certified by the Financière agricole du Québec.
- When necessary, the operator must sign the project notification form.
- The operator must submit a phosphorus status report to the Ministère de l'Environnement no later than June 15, 2003; he/she must use the form issued by the Ministère for this purpose.

-
- The operator whose current raising facility (without an increase in the herd) has above-limit phosphorus (P_2O_5) levels, must take steps to reduce them within the following time frames: organization of land required for 50% or more of the phosphorus (P_2O_5) load by April 1, 2005, 75% or more by April 1, 2008, and 100% by April 1, 2010.

The operator of a spreading facility

- The operator must establish an agro-environmental fertilization plan by April 1, 2003, if the cumulative surface of his/her spreading area (excluding pastures) exceeds 15 ha. In the case of vegetable or fruit productions, the cumulative surface is reduced to 5 ha.
- The operator must establish an annual phosphorus status report for all types of fertilizers as well as for the volume which can be spread on the available land with respect to the maximum amounts listed in Appendix 1.
- The operator must submit a phosphorus status report to the Ministère de l'Environnement no later than June 15, 2003, using the form issued by the Ministère for this purpose.



The operator (or responsible caretaker) of a storage facility

- The operator must take all the necessary steps to prevent and stop any spillage or leakage of materials stored in the facility.
- The operator must remove livestock waste prior to any spillage, at least once per year.
- The operator must keep a register of all incoming waste as well as of all pertinent information in regard to the received waste; upon request, this register must be sent to the Ministère de l'Environnement.
- The operator must reclaim or destroy the livestock waste. Reclamation constitutes either spreading in compliance with the current regulation, or treatment and transformation into useful products by persons authorized under the *Environment Quality Act*. Destroying livestock waste is similarly carried out by persons authorized under the *Environment Quality Act*.

The operator of a cultivated parcel of land

- The operator who cultivates a parcel of land onto which fertilizing matter is spread and who is authorized through an agro-environmental fertilization plan, must keep a register for each parcel of farmed land and for each annual crop, of the amounts, modes, and dates of spreading.



-
- The operator and the owner of the parcel of land must have in their possession a copy of this document and must keep it on file for a period of no less than two years beyond the last entry. Upon request, they must forward this document to the Ministère de l'Environnement.
 - The operator must, furthermore, order a soil analysis to be made, measuring the richness and phosphorus saturation of this parcel, in addition to the required parameters of its usage. This analysis must not date back further than five years from the year of fertilization.

The land owner (and the person to whom maintenance or usage has been conferred)

- This person must take the necessary measures to prevent livestock waste from reaching any surface or ground waters.
- If this person is aware of dumping, deposit, storing, or spreading of livestock waste onto his/her land in ways which do not conform with the current regulation, he or she must take the necessary steps to put an end to these and to eliminate these matters from his/her land with no delay, returning his/her land, if possible, to its former state.



The agronomist (member of the Ordre des agronomes du Québec)

- The agronomist must sign the agro-environmental fertilization plan. He/she must ensure the follow-up of recommendations made for the plan, and at

the end of a farming season, issue a report on the fertilization effected, attaching this to the plan.

- The agronomist must sign the annual phosphorus report for the different raising facilities.
- The agronomist must sign, when necessary, the project notification form affirming that the anticipated project is conform to the regulation, and must send this notice to the Ministère de l'Environnement within 60 days of the project start-up date. The agronomist must also act as the representative for the follow-up of these projects.

The engineer (member of the Ordre des ingénieurs du Québec)

- The engineer must sign plans and specifications relating to the floors of the facilities and to the storage facilities.
- In the case of a project notice concerning livestock production, the engineer must confirm that the existing storage facility will be able to receive the anticipated increase of livestock waste.
- In the case of building or enlarging storage capacities, the engineer must sign the notice attesting that the foreseen works are conform to the current regulation. This notice must be sent to the Ministère de l'Environnement within 60 days of the project start-up date. The engineer must also act as the supervising agent for these projects.



7

PENAL PROVISIONS



The regulation provides for fines in the event that standards are not respected. The fine for failing to respect one of the administrative provisions could amount to between \$1,000 and \$120,000, and the fine for failing to respect one of the environmental provisions could amount to between \$2,000 and \$500,000.





Agro-environmental fertilization plan: a plan that determines the type of crop produced and the limitation of the spreading of fertilizing materials on every parcel of an agricultural operation for each annual growing season (maximum 5 years).

Agro-environmental standard: a standard that respects agronomical standards yet aims at protecting the environment.

Annual phosphorus (P_2O_5) production: annual volume in cubic metres of livestock waste produced by a raising operation multiplied by the average phosphorus (P_2O_5) concentration in kilograms per cubic metre of these wastes.

Barrier strip: band of soil along a stream.

Chart: a method for making calculations presented as a table indicating the relationships between two or several variables.

Complete treatment: treatment which transforms livestock waste into a solid product of a different nature, resembling fertilizing granules or mature composts, and which destroys the bacteria contained in it.

Fertilizing substances: substances that increase soil productivity.

Ford: shallow part of a river that may be crossed on foot.

Heap of manure: pile of solid manure.

Hectare: a unit of area equivalent to 10,000 m².

Herd: all livestock in an agricultural operation.

Holding basin: watertight basin used to gather the liquid part of manure and the rainwater which was in contact with the manure.

Limited activity zones: territory of a local municipality where the quantity of phosphorus produced by the livestock on the territory exceeds the quantity of phosphorus absorbed by the crops grown there.

Liquid manure management: mode of evacuation of livestock waste other than solid manure management.

Livestock waste: livestock urine and faeces. The bedding used as an absorbent, as well as tainted water and rainwater that comes into contact with livestock waste, are also considered livestock waste.

Livestock yard: retention area or part of a retention area where livestock is kept, which differs from pastures in that it receives higher levels of phosphorus (P₂O₅) than the deposition levels specified in Appendix 1.

Low ramp: mechanism attached to spreading equipment which is used to spread manure close to the ground.

Manure: liquid mix of the urine and excrements of domestic animals, used as fertilizer.

Parcel: a plot of land forming a single block, planted with the same crop and requiring the same fertilization, belonging to the same owner and constituting a lot or part of a lot.

Raising facility: a building or yard used to raise livestock.

Raising operation: group of breeding and storage facilities owned by one individual and for which each facility or storage is no more than 150 m distant from a neighbouring facility or storage.

Reclamation: reuse of livestock waste for the fertilization of crops.

Silviculture: rational exploitation of forests.

Solid manure management: mode of evacuation of solid livestock waste in which liquids have been absorbed by solid matter following the use of sufficient quantities of bedding or other means of reducing the water content of waste to under 85% at the exit of the livestock building.

Spreading: the action of spreading a product on soil in an even manner.

Spreading area: number of parcels in a same area, belonging to the same owner who does not raise livestock.

Storage facility: a construction that contains livestock waste.

Total area of flow: mean width multiplied by mean height of stream.



APPENDIX I

Chart of maximum annual deposits for all fertilizers used on a parcel of land according to crops, in kilograms of total phosphorus (P₂O₅) per hectare

CORN

Phosphorus content (kg P/ha)	% of phosphorus saturation (P/AI)	Crop yield (TM/ha at 15% moisture)		
		< 7	7 to 9	> 9
0 – 30	—	140	150	160
31 – 60	—	130	140	150
61 – 90	—	120	130	140
91 – 120	—	110	120	130
121 – 150	—	100	110	120
151 – 250	< 5	90	100	110
	5 to 10	75	85	95
	> 10	50	60	70
251 – 500	≤ 10	65	75	85
	> 10	50	60	70
501 and +	—	40	50	60

CEREAL (OATS, WHEAT, BARLEY) AND SOY PRAIRIES AND PASTURES

Phosphorus content (kg P/ha)	% of phosphorus saturation (P/AI)	Crop yield (TM/ha at 15% moisture)		
		< 2.5 ¹	2.5 to 3.5 ¹	> 3.5 ¹
		< 5 ²	5 to 7 ²	> 7 ²
0 – 30	—	120	130	140
31 – 60	—	110	120	130
61 – 90	—	100	110	120
91 – 120	—	90	100	110
121 – 150	—	80	90	100
151 – 250	< 5	70	80	90
	5 to 10	55	65	75
	> 10	30	40	50
251 – 500	≤ 10	45	55	65
	> 10	30	40	50
501 and +	—	20	30	40

¹ Refers to cereal and soy yield.

² Refers to the yield of prairies and pastures.

Notes for Appendix I²

1. This appendix serves to calculate the minimum area required by the Regulation. The minimum area must be able to hold phosphorus (P_2O_5) depositions produced by the raising facility, not counting waste that has been treated or eliminated in conformance with the Regulation. All other fertilizers used in addition to this livestock waste must be taken into account when calculating the minimum area requirement.
2. This appendix refers to the total maximum phosphorus deposition and not to the phosphorus available at a given time. The phosphorus deposition depends on the type of crop, the yield of that crop, the richness of the soil, and the soil phosphorus saturation percentage of the parcel of land in question.
3. The maximum deposition levels are not recommendations for fertilization.
4. The deposition listed in this appendix is the sum of all phosphorus depositions that can be spread onto each of the parcels of land listed in the agro-environmental fertilization plan. The phosphorus deposition for one parcel of land is calculated by multiplying the number of hectares of the parcel with the value listed in this appendix for the parcel in question.
5. In the event that a soil analysis (specifying the richness of the soil and the phosphorus saturation level) is not available, a calculation can be made using the average analysis levels of the neighbouring parcels. In the event that no soil analyses whatsoever are available, the deposition value of a soil with a richness level higher than 501 is to be taken.
6. The yield of a crop for a given parcel is determined by the harvested yields of the past five years; it is assessed as follows:
 - for an agricultural operation with one crop insured by an individual harvest insurance program of the Financière agricole du Québec, the yield value provided by the agricultural operation is to be used;

2. To consult the complete notes for this appendix, please refer to the official regulation.

-
- for an agricultural operation with one crop insured by a collective insurance program of the Financière agricole du Québec, the average value for the agricultural region is to be taken as a yield value;
 - for an agricultural operation with one crop which is not insured by the Financière agricole du Québec, the yield value can either be estimated using a method acknowledged by the Financière agricole du Québec, or by taking the average value of the agricultural region.
7. For agricultural operations that cultivate parcels of land listed in an agro-environmental plan with types of crops not mentioned in the chart, the maximum phosphorus depositions are determined by the agronomist who issues the plan. In this plan, the agronomist must also indicate the reasons for the recommended maximum deposition.



APPENDIX II

TERRITORIES OF MUNICIPALITIES CONSIDERED LIMITED ACTIVITY ZONES



REGION

Bas-Saint-Laurent

RCM Kamouraska

Kamouraska (M)
La Pocatière (C)
Rivière-Ouelle (M)
Saint-Alexandre-de-Kamouraska (M)
Saint-André (M)
Saint-Denis (P)
Saint-Germain (P)
Saint-Joseph-de-Kamouraska (P)
Saint-Pacôme (M)
Saint-Pascal (C)
Saint-Philippe-de-Néri (P)
Sainte-Anne-de-la-Pocatière (P)
Sainte-Hélène (P)

RCM La Matapédia

Saint-Noël (V)
Saint-Tharcisius (P)
Sayabec (M)

RCM La Mitis

La Rédemption (P)
Les Hauteurs (M)
Saint-Gabriel-de-Rimouski (M)
Saint-Octave-de-Métis (P)
Sainte-Luce (M)

RCM Les Basques

Saint-Clément (P)
Saint-Jean-de-Dieu (M)
Sainte-Françoise (P)

RCM Matane

Sainte-Félicité (M)

RCM Rimouski-Neigette

Rimouski (C)
Saint-Anaclet-de-Lessard (P)
Saint-Valérien (P)

RCM Rivière-du-Loup

L'Isle-Verte (M)
Rivière-du-Loup (C)
Saint-Arsène (P)
Saint-Hubert-de-Rivière-du-Loup (M)

RCM Témiscouata

Saint-Louis-du-Ha! Ha! (P)

Saguenay— Lac-Saint-Jean

OUTSIDE RCM

Saguenay (C)

RCM Lac-Saint-Jean-Est

Alma (C)
Hébertville-Station (V)
Métabetchouan—Lac-à-la-Croix (C)
Saint-Bruno (M)

RCM Le Domaine-du-Roy

Chambord (M)
Saint-Prime (M)

Capitale-Nationale

RCM Charlevoix

Les Éboulements (M)
Saint-Hilarion (P)

RCM Charlevoix-Est

Saint-Irénée (P)

RCM L'Île-d'Orléans

Sainte-Famille (P)

Mauricie

OUTSIDE RCM

Trois-Rivières (C)

RCM Les Chenaux

Saint-Luc-de-Vincennes (M)

Saint-Maurice (P)

Sainte-Anne-de-la-Pérade (M)

Sainte-Geneviève-de-Batiscan (P)

RCM Maskinongé

Louiseville (C)

Saint-Barnabé (P)

Saint-Boniface-de-Shawinigan (V)

Saint-Étienne-des-Grès (P)

Saint-Léon-le-Grand (P)

Saint-Paulin (M)

Sainte-Angèle-de-Prémont (M)

Sainte-Ursule (P)

Yamachiche (M)

RCM Mékinac

Saint-Adelphe (P)

Saint-Tite (C)

Estrie

RCM Asbestos

Danville (C)

Saint-Camille (T)

Saint-Georges-de-Windsor (M)

Wotton

RCM Coaticook

Coaticook (C)

Compton (M)

Dixville (M)

East Hereford (M)

Martinville (M)

Saint-Herménégilde (M)

Saint-Malo (M)

Saint-Venant-de-Paquette (M)

Sainte-Edwidge-de-Clifton (T)

Stanstead-Est (M)

RCM Le Granit

Lambton (M)

Stratford (T)

RCM Le Haut-Saint-François

Cookshire (C)

Eaton (M)

Weedon (M)

Westbury (T)

RCM Le Val-Saint-François

Bonsecours (M)

Lawrenceville (V)

Maricourt (M)

Melbourne (T)

Racine (M)

Saint-François-Xavier-de-Brompton (P)

Sainte-Anne-de-la-Rochelle (M)

Stoke (M)

Val-Joli (M)

Valcourt (T)

RCM Memphrémagog

Hatley (M)

Abitibi-Témiscamingue

RCM Témiscamingue

Fugèreville (M)

Laverlochère (P)

RCM Vallée-de-l'Or

Val-d'Or (C)

Chaudière-Appalaches

OUTSIDE RCM

Lévis (C)

RCM Beauce-Sartigan

La Guadeloupe (V)

Saint-Benoît-Labre (M)

Saint-Éphrem-de-Beauce (M)

Saint-Honoré-de-Shenley (M)
Saint-Martin (P)
Saint-Philibert (M)
Saint-Simon-les-Mines (M)

RCM Bellechasse

Armagh (M)
Honfleur (M)
La Durantaye (P)
Saint-Anselme (M)
Saint-Charles-de-Bellechasse (M)
Saint-Gervais (M)
Saint-Henri (M)
Saint-Lazare-de-Bellechasse (M)
Saint-Léon-de-Standon (P)
Saint-Malachie (P)
Saint-Michel-de-Bellechasse (M)
Saint-Nazaire-de-Dorchester (P)
Saint-Nérée (P)
Saint-Raphaël (M)
Sainte-Claire (M)

RCM L'Amiante

Adstock (M)
Disraeli (P)
Kinnear's Mills (M)
Sacré-Coeur-de-Jésus (P)
Saint-Adrien-d'Irlande (M)
Saint-Fortunat (M)
Saint-Jacques-de-Leeds (M)
Saint-Pierre-de-Broughton (M)
Sainte-Clotilde-de-Beauce (M)
Thetford Mines (C)

RCM L'Islet

L'Islet (M)
Saint-Aubert (M)
Saint-Roch-des-Aulnaies (P)
Sainte-Louise (P)

RCM La Nouvelle-Beauce

Frampton (M)
Saint-Bernard (M)
Saint-Elzéar (M)
Saint-Isidore (M)
Saint-Lambert-de-Lauzon (P)
Sainte-Hénédine (P)
Sainte-Marguerite (P)
Sainte-Marie (C)
Saints-Anges (P)

Scott (M)
Vallée-Jonction (M)

RCM Les Etchemins

Lac-Etchemin (M)
Saint-Benjamin (M)
Saint-Zacharie (M)
Sainte-Rose-de-Watford (M)

RCM Lotbinière

Dosquet (M)
Leclercville (M)
Notre-Dame-du-Sacré-Coeur-
d'Issoudun (P)
Saint-Agapit (M)
Saint-Apollinaire (M)
Saint-Édouard-de-Lotbinière (P)
Saint-Flavien (M)
Saint-Gilles (P)
Saint-Janvier-de-Joly (M)
Saint-Narcisse-de-Beaurivage (P)
Saint-Patrice-de-Beaurivage (M)
Saint-Sylvestre (M)
Sainte-Agathe-de-Lotbinière (M)
Val-Alain (M)

RCM Montmagny

Cap-Saint-Ignace (M)
Montmagny (C)
Saint-François-de-la-Rivière-du-Sud (M)

RCM Robert-Cliche

Beauceville (C)
Saint-Frédéric (P)
Saint-Joseph-de-Beauce (C)
Saint-Joseph-des-Érables (M)
Saint-Jules (P)
Saint-Odilon-de-Cranbourne (P)
Saint-Séverin (P)
Saint-Victor (M)
Tring-Jonction (V)

Lanaudière

RCM D'Autray

Saint-Didace (P)
Saint-Gabriel-de-Brandon (P)
Saint-Norbert (P)

RCM Joliette

Crabtree (M)
Saint-Ambroise-de-Kildare (P)
Saint-Paul (M)
Saint-Pierre (V)
Sainte-Mélanie (M)

RCM L'Assomption

L'Épiphanie (P)

RCM Matawinie

Saint-Félix-de-Valois (M)
Saint-Jean-de-Matha (M)

RCM Montcalm

Saint-Alexis (P)
Saint-Esprit (M)
Saint-Liguori (P)
Saint-Lin--Laurentides (C)
Saint-Roch-de-l'Achigan (P)
Saint-Roch-Ouest (M)
Sainte-Julienne (M)
Sainte-Marie-Salomé (P)

Laurentides

RCM La Rivière-du-Nord

Saint-Jérôme (C)
Sainte-Sophie (M)

RCM Les Laurentides

Sainte-Agathe-des-Monts (C)

Montérégie

RCM Acton

Acton Vale (C)
Béthanie (M)
Roxton (T)
Roxton Falls (V)
Saint-Nazaire-d'Acton (P)
Saint-Théodore-d'Acton (P)
Sainte-Christine (P)
Upton (M)

RCM Brome-Missisquoi

Brigham (M)
Brome (V)

Dunham (C)
East Farnham (V)
Farnham (C)
Lac-Brome (C)
Saint-Ignace-de-Stanbridge (P)
Sainte-Sabine (P)
Stanbridge Station (M)

RCM La Haute-Yamaska

Bromont (C)
Granby (C)
Roxton Pond (M)
Saint-Alphonse (P)
Saint-Joachim-de-Shefford (P)
Sainte-Cécile-de-Milton (T)
Shefford (T)
Warden (V)

RCM La Vallée-du-Richelieu

Saint-Jean-Baptiste (P)

RCM Le Haut-Richelieu

Mont-Saint-Grégoire (M)
Sainte-Brigide-d'Iberville (M)

RCM Les Maskoutains

La Présentation (P)
Saint-Barnabé-Sud (M)
Saint-Bernard-de-Michaudville (M)
Saint-Dominique (M)
Saint-Hugues (M)
Saint-Hyacinthe (C)
Saint-Jude (M)
Saint-Liboire (M)
Saint-Louis (P)
Saint-Pie (P)
Saint-Simon (P)
Saint-Valérien-de-Milton (T)
Sainte-Hélène-de-Bagot (M)
Sainte-Madeleine (V)

RCM Rouville

Ange-Gardien (M)
Rougemont (M)
Saint-Césaire (C)
Saint-Paul-d'Abbotsford (P)

RCM Vaudreuil-Soulanges

Saint-Zotique (V)

Centre-du-Québec

RCM Arthabaska

Chesterville (M)
Maddington (T)
Norbertville (V)
Saint-Albert (M)
Saint-Christophe-d'Arthabaska (P)
Saint-Norbert-d'Arthabaska (M)
Saint-Rosaire (P)
Saint-Valère (M)
Sainte-Anne-du-Sault (M)
Sainte-Clotilde-de-Horton (M)
Sainte-Élisabeth-de-Warwick (P)
Sainte-Séraphine (P)
Victoriaville (C)
Warwick (C)

RCM Bécancour

Fortierville (M)
Saint-Sylvère (M)
Sainte-Françoise (M)
Sainte-Marie-de-Blandford (M)
Sainte-Sophie-de-Lévrard (P)

RCM Drummond

L'Avenir (M)
Lefebvre (M)
Notre-Dame-du-Bon-Conseil (P)
Saint-Edmond-de-Grantham (P)
Saint-Eugène (M)
Saint-Germain-de-Grantham (M)
Saint-Joachim-de-Courval (P)
Saint-Lucien (P)
Saint-Nicéphore (C)
Wickham (M)

RCM L'Érable

Inverness (M)
Laurierville (M)
Lyster (M)
Notre-Dame-de-Lourdes (P)
Plessisville (P)
Princeville (C)
Sainte-Sophie-d'Halifax (M)
Villeroi (M)

RCM Nicolet-Yamaska

Pierreville (M)
Saint-Wenceslas (M)
Saint-Zéphirin-de-Courval (P)

Key: T : Township
M : Municipality
C : City
V : Village
P : Parish



ADDRESSES



Information Centre of the Ministère de l'Environnement

For further information regarding the *Regulation respecting agricultural operations*, please contact the Information Centre of the Ministère de l'Environnement or the Regional Offices of the Ministère:

The Information Centre of the Ministère de l'Environnement

Édifice Marie-Guyart, rez-de-chaussée
675, boulevard René-Lévesque Est
Québec (Québec) G1R 5V7
Telephone: (418) 521-3830
1 800 561-1616
Fax: (418) 646-5974
E-mail: info@menv.gouv.qc.ca
Website: www.menv.gouv.qc.ca

List of Regional Offices of the Ministère de l'Environnement

01 Bas-Saint-Laurent

212, avenue Belzile
Rimouski (Québec)
G5L 3C3
Telephone: (418) 727-3511
Fax: (418) 727-3849

02 Saguenay—Lac-Saint-Jean

3950, boul. Harvey, 4^e étage
Jonquière (Québec) G7X 8L6
Telephone: (418) 695-7883
Fax: (418) 695-7897

03 Capitale-Nationale

365, 55^e Rue Ouest
Charlesbourg (Québec)
G1H 7M7
Telephone: (418) 644-8844
Fax: (418) 646-1214

04 Mauricie

100, rue Laviolette, 1^{er} étage
Trois-Rivières (Québec)
G9A 5S9
Telephone: (819) 371-6581
Fax: (819) 371-6987

05 Estrie

770, rue Goretti
Sherbrooke (Québec)
J1E 3H4
Telephone: (819) 820-3882
Fax: (819) 820-3958

06 Montréal

5199, rue Sherbrooke Est
Bureau 3860
Montréal (Québec) H1T 3X9
Telephone: (514) 873-3636
Fax: (514) 873-5662

07 Outaouais

98, rue Lois
Hull (Québec) J8Y 3R7
Telephone: (819) 772-3434
Fax: (819) 772-3974

08 Abitibi-Témiscamingue

180, boul. Rideau, 1^{er} étage
Rouyn-Noranda (Québec)
J9X 1N9
Telephone: (819) 763-3333
Fax: (819) 763-3202

09 Côte-Nord

818, boulevard Laure (RC)
Sept-Îles (Québec) G4R 1Y8
Telephone: (418) 964-8888
Fax: (418) 964-8023

10 Nord-du-Québec

180, boul. Rideau, 1^{er} étage
Rouyn-Noranda (Québec)
J9X 1NP
Telephone: (819) 763-3333
Fax: (819) 763-3202

**11 Gaspésie—
Îles-de-la-Madeleine**

124, 1^{re} Avenue Ouest
Sainte-Anne-des-Monts
(Québec) G4V 1C5
Telephone: (418) 763-3301
Fax: (418) 763-7810

12 Chaudière-Appalaches

675, route Cameron
Bureau 200
Sainte-Marie (Québec)
G6E 3V7
Telephone: (418) 386-8000
Fax: (418) 386-8080

13 Laval

850, boulevard Vanier
Laval (Québec) H7C 2M7
Telephone: (514) 873-3636
Fax: (514) 873-5662

14 Lanaudière

100, boulevard Industriel
Repentigny (Québec)
J6A 4X6
Telephone: (450) 654-4355
Fax: (450) 654-6131

15 Laurentides

140, rue Saint-Eustache
3^e étage
Saint-Eustache (Québec)
J7R 2K9
Telephone: (450) 623-7811
Fax: (450) 623-7042

16 Montérégie

201, place Charles-Le Moyne
2^e étage
Longueuil (Québec) J4K 2T5
Telephone: (450) 928-7607
Fax: (450) 928-7755

17 Centre-du-Québec

1579, boul. Louis-Frêchette
Nicolet (Québec) J3T 2A5
Telephone: (819) 820-3882
Fax: (819) 820-3958

Legal Deposit
Bibliothèque nationale du Québec, 2003
ISBN 2-550-41138-2

Envirodoq ENV/2002/0133A



NOTES



NOTES



• QUÉBEC'S
• WATER

A SOURCE
OF PRIDE



Environnement
Québec 



This paper contains 30% post-consumer recycled fibres.

4669A-03-06